

the rice field districts at dusk or at night should depend on careful quinine prophylaxis in conjunction with tightly screened dwellings and veils.

#### SUMMARY.

1. The cultivation of rice which demands shallow, practically stagnant water throughout the summer months, has increased the number of mosquitoes and malarial cases in proportion to the phenomenal growth of the industry.

2. Fifty per cent. of the malarial mosquitoes are breeding in pools adjacent to the rice fields.

3. The mosquitoes breed in neglected pools for two months or more before the rice fields are flooded and for another month after the water is drained from the fields.

4. The solution of the malaria problem in the rice fields rests to-day on (1) the elimination of all breeding places outside the rice fields before, after and during the time the fields are flooded, and (2) thorough quinine treatment during the winter months in conjunction with quinine prophylaxis, and careful screening during the months when mosquitoes are prevalent.

### COMMON ERRORS IN DIAGNOSIS OF SYPHILIS OF SKIN AND MUCOUS MEMBRANES.\*

By GEORGE D. CULVER, M. D., San Francisco.

Syphilitic lesions of the skin and mucous membranes are often of more than ordinary interest. Many persist through months or years without treatment or even in spite of indifferent anti-syphilitic treatment. Some simulate other conditions so closely that no wonder incorrect diagnoses are made.

Even with excellent laboratory assistance in diagnosis it is possible for atypical lesions to run the gauntlet and escape proper treatment for a long time. The keenest observer may fail to recognize a lesion that when seen later may stand out as typical. Syphilis, though showing itself in a great variety of forms, tends always to types of eruption, depending largely upon the location of the lesion. This repetition of type in definite areas is most interesting and often helpful toward a correct conclusion.

The natural dependence of the diagnostician upon good laboratory proofs tends to make him rely less upon the clinical picture. This leads to error in both positive and negative conclusions. Our first clinical impressions, if the foundations are sound, are often of greater value than technically determined conclusions if those conclusions fail in absolute positiveness. In no other disease in a small percentage of cases are the technical findings more apt to mislead than in syphilis.

This is not meant to be an exhaustive discussion. In such a big subject as syphilis it is possible to mention in a short paper only a few of the most common errors. I have, therefore, limited my remarks to actual experience.

As to the initial lesion of syphilis, failure to recognize a chancre is still frequent. This is espe-

cially true of extragenital chancre. An ugly, hard, persistent sore, located anywhere extragenitally, may be a chancre even if as unusually placed as upon the instep or an eyelid, or the back of the neck. A not uncommon location is upon the lips, where usually it is a rapidly growing, ugly looking sore which ulcerates, and looks and feels much like a swiftly developing epithelioma. As a rule it has the same cartilaginous hardness, and the same central ulceration. It may involve the whole lip. Nevertheless, though the mimicry of chancre to epithelioma may often be close, an error should be avoided. Any large hard ulcer of a lip that has been present not longer than two months, usually in a young person of the age when such a location of infection would not be unlikely, and which is accompanied by swollen lymphatic nodules, must be regarded as possibly a chancre. I recall an instance of a man with a chancre of the upper lip, which was so slow in yielding to treatment that he went elsewhere for advice, and was persuaded to have it cut out. It promptly sprang up again, and he returned for further internal treatment, which was finally successful. The mouth is a situation in which it is easy to err in a diagnosis. Two instances in which the tonsil was removed because of chancre, in which later evidence of syphilis was convincing, have come to my attention within the last few months. In one case there was a reappearance of the indurated primary ulcer in the tonsillar site after removal of the tonsil. An unusual feature of this case was the appearance of the roseola upon the soles and nowhere else. It is important to differentiate a syphilitic ulceration of the tonsil, whether primary or gummatous, from Vincent's angina, which can give an almost identical picture. In the latter condition the microscopical findings are so definite as quickly to dispel any doubt.

I saw an instance of an undiagnosed primary lesion of the lower gums which was so extensive as to result in the removal of all the lower teeth. It was five months before a correct diagnosis was made. A single gummatous ulcer of the tongue may easily be mistaken for a chancre. A chancrous ulcer is usually of more marked cartilaginous hardness, and the base and walls look more active, giving an impression of an acute inflammatory process, while the edges of a late ulcer are either steep and punched out looking or undermined, and the base is gently raised, flattened and a duller red. What may make it more puzzling is the fact that enlarged lymphatic nodules under the jaw are not an unusual accompaniment of late lesions in the mouth, and when present they are likely to be tender. The lymphatic inflammation is in all probability due to secondary infection in the open wound. This was eminently the case in an instance recently seen, in which the lesions were situated on the upper surface of the tongue tip, a situation peculiarly exposed to irritation and friction against the front teeth.

A very small sore on the penis not unlike a few broken vesicles of herpes simplex and without perceptible induration, may prove to be a chancre. Cauterization of such a sore should be inflexibly

\* Read before the San Francisco County Medical Society, August 1, 1916.

avoided pending a positive conclusion. One error such as the following should make the physician extremely cautious:

A man with a non-indurated sore upon the glans penis sought advice. He was fully convinced the sore was a chancre. Five physicians, including myself, tried and almost succeeded in persuading him it was not. Repeated search failed to demonstrate the *treponema pallidum*. Wassermann tests were made, and different technicians reported first a slightly positive, then a positive, and finally a strongly positive reaction during the short period of five days, the strongly positive reaction appearing thirty-one days after the sore was first noticed.

The tendency to misinterpret a syphilitic roseola is less strong than the reverse attitude of assuming a drug eruption or a skin manifestation of one of the more innocent diseases as being syphilitic. The former error, however, is not uncommon. The fact that not infrequently a positive Wassermann report is given in non-syphilitic conditions makes it still more serious and increases the liability to the accident. For instance, a young man with gonorrhea of five weeks' duration presented a macular rash of quite general distribution, and his blood serum was reported as giving a positive Wassermann. It was not a drug eruption, the rash was more upon the surface, and of a less definite character than a roseola, not the discreet rosy blotches of syphilis, which appear as if delicately painted just beneath the superficial layers of skin. It disappeared within three days. The rash and possibly also the Wassermann reaction were from intestinal intoxication.

Pityriasis rosea is often mistaken for a syphilitic roseola, and may precipitate both the patient and the physician into a trying dilemma. This skin affection should always be considered whenever a macular rash that may be syphilitic is seen. It generally begins as a mother patch which may or may not have been noticed by the patient. A search should be made for this patch, the most frequent location being somewhere in the region of the flank. If it is a superficial rash with cigarette paper wrinkling, the wrinkling seen best in an oblique light, it is easily distinguishable from a roseola in which the cigarette paper wrinkling is absent, and in which the redness is more deeply situated and of a more delicate rose tint. One should always look on the forehead, scalp, palms and soles, as well as in the commoner locations on the body for rose spots of syphilis, as the spots of pityriasis rosea will not be found in these locations.

A man of thirty-five while attending the Exposition, with his wife, developed a scaly patch on the prepuce. This was followed by a wide spread macular and patchy eruption of brownish red color and with cigarette paper wrinkling. His physician whom he first consulted, made a diagnosis of syphilis. Being assured in his own mind that he must have contracted the disease innocently, the man immediately informed his wife as to the physician's conclusion. She insisted upon his seeking further advice, but on being assured it was pityriasis rosea was inclined to think

it was a trumped-up diagnosis to avoid a family row.

A roseola may escape a correct diagnosis because of an absence of a definite history. A middle-aged woman of excellent habits consulted her physician for a white spot on the right tonsil, which was treated. An ulcer appeared, became quite hard, and was accompanied by swollen nodules in the right side of the neck. It resisted local treatment and the tonsil was removed. Three months later a rash appeared, first on the flexor surfaces of the arms, then on the body in the flanks, and upon the legs, and when I saw her it was a typical roseola, which had been present about three weeks. Her blood serum gave a strongly positive Wassermann.

It seems that errors are more frequently made in the diagnosis of late cutaneous syphilis and late lesions of the mucous membranes than in early syphilis. There is often such a close resemblance to epithelioma that all aids possible have to be used to reach a conclusion. The same applies, although of less frequent occurrence, to tubercular ulcer, lupus vulgaris and lupus erythematosus, and also to the commoner skin diseases, psoriasis and the indolent seborrheids. The above mentioned diseases may in turn be easily mistaken for syphilis as may erythema multiforme, acne indurata, and some of the uncommon conditions, such as leprosy, mycosis fungoides, Bazin's disease, and almost all other granulomata. The list is by no means complete, but it includes the more frequent. It would seem that iodid eruptions are at present less frequent than formerly. This drug is not so commonly employed since the introduction of salvarsan.

I have the record of a case in which there was extensive destruction of all the soft tissues of a large part of the forehead, including the periosteum and outer plate of the frontal bone, which had started more than ten years before and had slowly but steadily progressed. There seemed no doubt clinically that it was an epithelioma, and many previous diagnoses of this had been made. As it occurred before the advent of the Wassermann reaction, and as it was inoperable if cancerous, mixed specific treatment was prescribed as a therapeutic test. Improvement was soon noticeable. Though it required many months, healing was eventually complete. The separation of a tremendous slough, including a piece of the outer plate of the frontal bone, in size, irregularly four by seven centimeters, was an interesting feature of the case.

At the present time many physicians are loth to make a therapeutic test when laboratory findings are negative. This should not be, as it is not at all unusual for long standing late lesions to clear up under antisiphilitic medication after all other proofs have failed in establishing a diagnosis. Yet one should not reach a conclusion too quickly from the effects of medication.

Recently a man with a large ragged ulcer about five centimeters in diameter, situated on the back of the neck, sought treatment. The lesion had been growing about three years. There was an objection to an operation, and as there was suffi-

cient indication in its appearance for antisyphilitic treatment, potassium iodid internally and mercurial ointment externally were prescribed. Under the medication the ulceration almost disappeared and improvement was marked. It then looked even more like an epithelioma than before. It was removed and microscopically shown to be epitheliomatous, without any evidence of luetic involvement as might have been surmised.

Late ulcerative syphilis about the mouth and nose is not uncommon, yet incorrect diagnoses are frequently made. In December of last year I saw an instance in that of a man thirty-two years old with an ulcer on the upper lip in the left side of the mustache, which began two months before. It was very deep with a necrotic center and rolled, uplifted, undermined edges. There were a large number of scars, the result of ulcerations that began below the vermilion border of the lip, a little to the left of the median line, and spread across to beyond the right corner of the mouth. There was immense scarring of the extensor surfaces of both forearms and of the legs. These scars were the result of ulcerations which began in 1905. Under neosalvarsan and grey oil injections, healing was rapid. This case was interesting because of the long continuance of the ulcerative process, of the varied diagnoses that had been made, and the like varied but ineffective lines of treatment that had been followed.

Another and even a more interesting instance of ulceration near the mouth was in that of a woman thirty years old who gave a history of first noticing what were supposed to be canker sores along the inner surface of the lower lip two years previously. Then followed a more prominent affection of the left corner of the mouth about one year later. This healed and the affection appeared at the right corner of the mouth about six months before she came in, involving both the skin and mucous membrane. It remained almost stationary for the whole time. There were present enlarged but freely movable lymph nodules both sublingual and right submaxillary. There was a small scar above and one below the right corner of the mouth. The patient had been almost constantly under the care of one or another physician, but apparently was never given antisyphilitic treatment. The Wassermann reaction was repeatedly negative and so was misleading.

The presence of scars as of ulcers healed, is a strong point in favor of syphilis, and of great assistance in the diagnosis of a doubtful lesion. There are other conditions about the face which in partial healing may leave scars, notably lupus erythematosus, and far more rarely in this country, lupus vulgaris. The scars resulting from healed gummatous ulcerations are more deeply pitted, as would be expected from the character of the lesion which, when absorbed, is usually absorbed rapidly, leaving a very definite loss of substance. This loss is only partially filled in by rapid forming scar tissue, hence the resultant depression. I have seen marked keloidal growths follow the healing of syphilis. They were from early ulcerations that through their secretions formed crusts, which covered a secondary staphylo-

coccic infection. This secondary infection stimulated the production of exuberant granulation tissue, and this in turn necessitated that the epithelial covering should grow up over the granulations, thereby forming hypertrophic scars.

Herpes zoster often leaves deeply pitted scars on the face. These scars should not be puzzling even when some subsequent lesion appears, as their limitation to one side only and the clear ascertainable history of their production, prevents them from being mistaken for anything else.

The kidney shape of luetic ulcerations due to healing in one section while spreading in all others, is not as marked in gummatous lesions on the face or mucous membranes as elsewhere upon the body. A very common location of slowly spreading syphilitic infiltration is in the naso-facial fold extending into the nostril. It may progress for months with very little ulceration and be easily mistaken for epithelioma. A most deceptive manifestation of late syphilis not infrequently occurs upon the scalp as split pea-sized ulcerations in groups of few or many. They are the result of the breaking down of miliary gummata. It is here that the raw ham color is so definite that it should be a key to further inquiry.

Lupus erythematosus is frequently diagnosed as syphilis. It is a disease that may so closely resemble a serpiginous syphilide as to deceive anyone, especially when not present as the typical bat wing eruption of the nose and cheeks. It may have a deeply infiltrated edge that spreads from a portion that has healed, leaving a scar just as syphilis may, but without ulcerating, and the scarring is smoother and less depressed. Lupus erythematosus is almost always scaly or crusted and has horny comedo plugs distributed throughout the active portion, while the spreading syphilide when not ulcerated has a smooth surface almost velvety in character. I mention lupus erythematosus as it is not uncommon, whereas lupus vulgaris is rare in California.

Seldom is syphilis mistaken for leprosy, but it is probably not too broad a statement to make that practically every instance of cutaneous leprosy seen in California has at some time during its course been thought to be syphilis. As the Wassermann test is frequently positive in leprosy, the affair becomes more complicated. Habitual testing of the sensations of touch, pain and temperature in doubtful serpiginous lesions may lead to an occasional surprise, for if the lesion be lepra and not syphilis, the anesthesia will be the deciding point in the diagnosis.

Throughout this discussion I have purposely placed but little stress upon history as a conclusive factor in the diagnosis of cutaneous syphilis. In a very large proportion of the instances we see in which errors have been made either by ourselves or others, the history has been misleading. Often there is an absence of a positive history when the condition is syphilis, but in other instances the patient will call attention to the fact when seeking advice, that he had had syphilis, whereas the lesion for which he seeks advice is non-syphilitic. It is safest to place only such re-

liance upon the history as is indicated by the case in hand.

Another especially important point to be considered in the avoidance of error is that before reaching a positive conclusion as to a lesion present on an exposed part of the skin, all other parts should be carefully inspected.

A widow, forty-one years of age, was sent in with an eruption on her left arm, which had been diagnosed as tuberculosis. The eruption consisted of dusky red blotches on the extensor surface of the left forearm, with a good deal of infiltration. It was noted in the record at the time that "the infiltration is deeply seated and may be partly due to having had a leech applied yesterday." It was also noted at the first visit that "lupus nodules can be seen with dioscopy." I never saw a better example of the apple jelly nodules seen through a glass slide pressed upon the lesion to remove the blood from the skin. The eruption was of fifteen years' duration. When it first appeared the patient was helping her husband in butchering, a trade exposed to tubercular infection. The diagnosis of lupus seemed a positive one and treatment was begun accordingly.

On a subsequent visit I learned there was a periostitis of the left tibia, a number of small ulcers and many scars of healed ulcers near the left knee that were without doubt specific. The first ulcers had appeared nineteen years before. On the first visit the patient was too timid to mention the leg condition, and I was so sure the lesions on the arm were tubercular I did not examine her more thoroughly. Under antisymphilitic treatment all the leg lesions healed and simultaneously those of the arm as well.

It is sometimes extremely difficult to differentiate between syphilitic and varicose ulcers of the leg, especially when the ulcers are out of their usual zones. The upper third below and about the knee seems to be reserved for syphilis, whereas the venous defects usually occur below this region. Tubercular ulcers of the leg are infrequent unless associated with other tubercular conditions. It may not be possible to conclude from the ulcer's character which it is, but in most instances a conclusion can be reached from the clinical appearance. Multiplicity speaks for syphilis as does the presence of scars. Punched-out crater-like ulcers, irregularly kidney shaped, are usually syphilitic, and there is lacking the veil-like film seen over the base of a varicose ulcer. This film, which is caused by streptococcic infection, is nearly always present in the latter, and the ulcers are usually surrounded by doughy oedema and brownish-red discoloration. Close inspection of the oedematous skin will reveal many superficial venules. Pain may be present in either, but it is more frequently severe in varicose ulcers. That all varicose ulcers have syphilis as an etiological factor, as is sometimes suggested, is incorrect.

I have under my care at the present time an elderly woman with multiple ulcers over the instep, and about the internal malleolus of the left foot, that were mistaken for varicose ulcers. There is an absence of specific history and of concomitant proofs of syphilis, yet the unusual and long-standing

ing ulcerations are healing rapidly under anti-symphilitic medication.

In dealing with doubtful lesions I have found it helpful to habitually consider certain points: A syphilitic lesion may remain for years and not ulcerate; never cauterize a sore on the penis until a positive diagnosis is possible; never make a snap-shot diagnosis; carefully manipulate the lesion for the character of induration; examine the whole body; look for scars of former lesions; look upon the absence of history as of only secondary importance; consider a doubtful Wassermann negative unless further proof develops. If the clinical picture does not warrant it, never allow the patient to depend upon one positive Wassermann; with sufficient clinical evidence do not fail to prescribe specific treatment; a therapeutic test may clinch a diagnosis. And here it may be remarked that it is not necessary to administer salvarsan for this purpose; mercury and potassium iodide may prove even more in a few days than would an injection of salvarsan. Never tell a patient he has syphilis until you are sure of the correctness of your diagnosis.

I think it is sometimes forgotten that a patient once weighted with the thought that he has syphilis almost never again feels free. Such a diagnosis when once impressed upon him, even though it be strongly contradicted later, leaves him in constant fear. The demand made upon physicians for immediate opinions is so great that hurried conclusions are almost forced. It is wrong that more should be required of the physician than of an attorney in a difficult situation, unless time is urgent. He has the right to insist upon all the time necessary to thoroughly study his case, and he should assume this privilege. It is far better for him that he lose the case than that a hurried and in correct diagnosis be made.

#### Discussion.

Dr. D. W. Montgomery: The subject dealt with is of perennial interest—the differentiation of one disease from another or even from many others. The reverse of this, the consideration of the similarity of diseases, is hardly of less interest. Shortly ago I had a conversation with Dr. A. L. Fisher on this latter subject. Disease is the result of a conjunction of the human body and an irritating agent. Symptoms are the expression of the disturbed physiological processes. The variation in the symptoms is in a large measure due to the way the irritant acts on the body or on the particular part of the body selected by the irritant. The body and its physiology being practically the same in all races and in all climates, and the action on the tissues of one irritating agent being necessarily very similar to the action of any other irritating agent, the wonder is that the points of differentiation between the different diseases are so marked. But it has been only by the labor of a great number of very talented men that these differences between disease processes have been discovered and formulated.

The similarity between diseases must be greater between the individual maladies of certain groups, as, for instance, between those constituting the granulomata. Syphilis, however, in its course belongs to several groups successively. At first, as a chancre, it belongs to the group of the infectious ulcers. Then as the infective agent becomes dispersed throughout the body, and the extensive cutaneous eruptions appear, syphilis partakes of the characteristics of the exanthemata. Finally as the

disease slacks in intensity and becomes localized in this or that situation, it resembles the chronic granulomata.

Dr. Culver dwelt on the diagnosis between syphilitic roseola and pityriasis rosea, which is particularly important because this error may occur at a critical time in the course of syphilis, when the urgency for treatment is great and the danger of conveyance of infection, if untreated, is imminent.

The liability to err both negatively and positively is always present. The doctor, for instance, cites a case in which what was probably an intestinal intoxication gave rise to an eruption simulating either a pityriasis rosea or a syphilitic roseola and a positive Wassermann reaction of his blood serum.

We are apt to forget how recently the English-speaking medical world has been apprised of the existence of this disease, pityriasis rosea. Adamson recently in a few obituary remarks on the life of the late T. Colcott Fox, mentions that Gibert, the French dermatologist, was the first to describe this disease, and that in 1880 Duhring had described it in America. Four years afterward, in 1884, Fox wrote a short paper in the London Lancet on pityriasis maculata et circinata, which was the first account of the disease in England.

Dr. H. E. Alderson: This is a very interesting, important, and practical subject, introduced in an interesting way, and a subject which those of us interested in this question are always very glad to see brought up before a general medical meeting. If these matters were discussed more generally there would not be so many mistaken diagnoses.

It is not as difficult to make a mistake in the diagnosis of a late cutaneous syphilide as it is with an early syphilide, and yet we often see a diagnosis of epithelioma made in these cases and operation advised. During the past few years I have had a considerable number of such cases. Most of these patients were frightened at the prospect of an operation; went to several men in succession, all of whom made a diagnosis of epithelioma, and it turned out to be syphilis.

In making a diagnosis in early cases, I think a common mistake is in looking for the classical symptoms of Hunterian chancre. Many primary syphilitic lesions fail to show induration and some other classical features. We make it practically a matter of routine to use the dark field condenser in all cases, even though some of the sores may be clinically herpes or chancroid. A few days ago we had a beautiful specimen of serum, amounting to a practically pure emulsion of *treponema pallida*, obtained from beneath the floor of what was clinically a small herpes on the corona. Often, however, it is difficult to make a satisfactory dark field examination from genital lesions the first time the patient comes in, for the reason that the average patient obtains calomel, black wash or some other mercurial and tries to get rid of his trouble himself, with the result that the surface is for the time being freed from spirochaetes. We make it a practice to have these patients wash the surface with some mild soap and a non-bactericidal solution, and apply normal salt solution compresses, cold or lukewarm. Then after a couple of days it is possible to get satisfactory specimens.

Cutaneous syphilis can assume the form of so many skin diseases that we get in the habit of regarding almost every atypical case with suspicion. I have frequently seen nodular ulcerating crustaceous syphilitic lesions around the mouth and nose strongly resembling carcinoma. Fairly often a patient will come in with grouped crusted lesions or pigmentation in the distribution in which we commonly see herpes zoster on the side of the thorax, and the resemblance to a healing zoster is very striking.

Dr. C. F. Welty: Syphilis of the ear, nose and throat is comparatively easy of diagnosis in all of its different stages by trained physicians, in that line of work.

I once saw a chancre of the ear and made the diagnosis easily.

Deafness, due to syphilis, is much more complicated but may be cleared up with almost positive certainty.

Nasal syphilis, we see in the form of gummata, granulomata and bone lesions, all easy of diagnosis. As a rule syphilis does not attack the cartilage, usually bone. Once I did a septum operation for gumma of the septum. When I found a straight bone, I knew I had made a mistake. However, the circumstances surrounding the case were such that they led me in an entirely different direction.

Throat, buccal cavity, tongue, tonsils, pharynx: chancre of the lips seen every short while; chancre of tongue occasionally seen. Mucous patch may be seen anywhere, more particularly just within the mouth and about where the mucous membrane of the buccal cavity comes in contact with the cutting surface of the teeth.

Deeper ulcerating surfaces seen more particularly involving tonsil and about the margin of the gums.

Gummata of the hard palate: Tertiary manifestations of syphilis, such as large amount of scar tissue with ulcerations intervening. In other instances where the tongue is deeply furrowed, it should make you very suspicious.

As I said before, all these conditions are more or less easy of diagnosis, and doubly so when you can confirm it by a shortened bone conduction, or a syphilitic lesion elsewhere.

In fact, I am so sure of myself on many occasions that I do not care for a Wassermann reaction; it is only done to satisfy the patient.

Syphilis of the larynx is to me more difficult of diagnosis, and in many instances will have to depend on the therapeutic test confirmed by Wassermann reactions.

In all chronic, laryngeal cases with an increase in the size of the true or false cord; a perichondritis or other enlargements or ulcerations, syphilis must always be thought of and differentiated from a simple inflammation produced by irritation, tuberculosis and carcinoma as well as rhino scleroma.

Dr. H. B. Graham: In the diagnosis of syphilis of the mucous membranes, we hear much about the ulcerated lesions, gummata, and the broken patches of the mucous membranes; little is ever said about certain other signs that we get in all kinds of syphilis, both congenital and acquired. In many syphilitics we find a general, diffuse, bluish swelling of the mucous membranes, which occurs in the nose, mouth and larynx. It is aggravated by tobacco, and is a sign that is easily seen and very easily referred to syphilis as soon as the diagnostician once gets the blue picture in his mind. In the clinic, we very seldom miss a definite positive Wassermann in these cases.

I have said at some other meetings here that the diagnosis of syphilis is possibly more easily made above the neck than in any other region of the body. If the physician will examine the 8th nerve, pay attention to the eye, and to the mucous membrane of the nose, mouth and larynx, he will get his diagnosis of syphilis quicker than anywhere else because there are always signs there that can be localized. But I want particularly to call attention to this blue, soggy swelling of the mucous membranes, particularly of the nose.

Dr. John C. Spencer: My colleague, Dr. Welty, having started the ball rolling in the way of honest confessions, I want to report something which occurred in my experience in the pre-Wassermann days.

A brawny young Scotchman came to me with

the firm conviction that he was the subject of a syphilitic infection. Clinically his evidence was so meager that I was misled. He was engaged to be married to a very estimable young woman, and upon my diagnosis depended his perfectly manly desire to terminate the engagement, or leave matters in statu quo. There was a very vague history of a small lesion on the penis which I did not see. When he came to me, all he showed were a few scaly papules in the eyebrows and scalp. I slipped up on the diagnosis. He was so thoroughly convinced of the correctness of his diagnosis that he discontinued his visits to me and passed to the hands of a colleague who put him on antisyphilitic treatment, and those lesions cleared up.

Another was that of a sturdy young nurse attached to one of the hospitals in the city, and temporarily detached to attend a patient under my care. She had a lesion of the tonsil which I failed to recognize as syphilitic. After leaving my case she went back to the hospital. The visiting laryngologist of the hospital (I do not remember his diagnosis) concluded that the tonsil should come out and attempted to remove it by morcellation, under local anesthesia, with the result that a great deal of blood was lost. The lesion returned promptly. She was subsequently placed upon antisyphilitic treatment and the condition cleared up.

Dr. Culver correctly stated that no lesion of the genital organs should be cauterized until the diagnosis is made. This I consider wise judgment. The inference from that statement would lead one to believe that there are lesions which should be cauterized. Cauterizing any lesion on the penis—whether luetic or chancroidal or not—is bad practice, because these conditions may be overcome by other methods and the patient is saved the possibility of a complicating bubo.

Captain H. J. Nichols: One condition has not been mentioned in which the patient has syphilis, and incidentally has an epithelioma or some non-syphilitic ulcer; the Wassermann is taken and found to be positive, but if a section is made the lesion is found to be a true epithelioma.

I remember an instance of an investigator in syphilitic lines, who had a canker sore of the mouth due to some digestive disturbance. He asked me to examine it with the dark field; of course I found nothing. At that time we did not take his Wassermann, but a year or two later his Wassermann was taken and it was found that he was infected, and the examination of the spinal fluid showed that he had been infected for some time. If we had made a Wassermann earlier we might have thought the non-specific ulcer was luetic.

I admire the doctor's attitude toward laboratory reports and diagnoses as compared with the clinical. I think the pendulum is swinging back where it belongs. Clinical medicine is a distinct art in itself and should not be allowed to become obsolete in favor of laboratory findings. The Wassermann reaction certainly is not specific in syphilis any more than the X-ray plate is specific for kidney stone; but it seems to me that people who ignore the value of laboratory aids are even worse off than those who place too much dependence upon them.

Dr. G. C. Macdonald: I have been disappointed in Wassermann reactions. In some cases I have watched cases systematically and treated them intermittently. In the case of a man with true Hunterian chancre, I stop treatment for three months, have a Wassermann examination made with negative results, although clinically the disease is present. I know of a case of a young man in the country now; he went through all the secondaries of syphilis and he has failed to show a positive Wassermann. There is no doubt that he has had syphilis. Although I am not one of those

men who put laboratory findings on one side, I would not consider a laboratory finding final unless it coincided with the clinical manifestations.

I did not know that anyone ever cauterized chancres any more. Soft sores can be cured by saturated solution of argyrol. Of course in the case of sloughing phagedena extensive cauterization might become necessary.

Speaking of the skin lesions of syphilis, we know them to be polymorphous. One of my old teachers used to tell me that syphilitic rashes were like cuckoos; they have no nest of their own, but use everybody else's, hence they simulate every other kind of eruption. Syphilitic rashes never itch and have as a rule the typical raw ham appearance.

Speaking of the obscure cases where there has been no primary sore observed, we should remember that probably every fourth gonorrhea is an urethral chancre, and soft sores very often but conceal a true Hunterian chancre which manifests itself by the "soft sore" becoming a hard one on or after the 21st day from infection, the patient having the double event.

Dr. A. S. Keenan: We have heard from the ear specialist, the throat specialist and the G. U. specialist; it may not be amiss to have a word from the general practitioner, because we see cases of syphilis and, judging from the open confessions made here to-night, we make almost as many mistakes. One point that has helped me in diagnosing chronic syphilitic lesions, is that the blood pressure is 10, 15, or 20 points higher in a syphilitic case. While this may not be a very important matter, when you are weighing the pros and cons of a case it helps you a good deal.

We frequently have to fall back upon the therapeutic test in deciding doubtful questions, and it comes to this: if the lesion can resist the point of salivation it is not syphilis, and if it disappears it is syphilis. We often have to give mercury and iodide to clear up those doubtful cases.

Another point that gives the general practitioner a good deal of trouble is the ethical side of the question. It is difficult sometimes to know what to tell a man when you believe, but are not sure, that he has syphilis. I remember a glass blower who came to me with a chancre of the mouth, and he wanted to return and take up his work. That was a few years ago, when each of three men blew twenty minutes on the tube. I told him that he must quit and he said he would not. Finally I told him that if he did not quit I would lay the matter before the Board of Health, and that frightened him, and he promised not to return to work.

I had another one of those doubtful cases, which gave me considerable worry. Recently I confined a woman at the hospital, and it was the custom at that time to have a Wassermann of all the placentas. In this case the Wassermann was positive, and besides there was a history two years previously, of a miscarriage. I told the woman to have her husband come in to see me. He came to my office that evening. He was a big stevedore, and wanted to know what I wanted with him. In as gentle a manner as possible, I told him how the blood examination made on the afterbirth had pointed to syphilis, and that he must have the disease. He became very indignant, stormed up and down the office, threatened to "knock my block off" and made an awful fuss, because I had dared to charge that he had any disease or that his wife had any disease. He had never been ill in his life, and to exemplify his good health, he thumped his chest. I backed water a little, and explained that the Wassermann test of the blood might in some cases be wrong. This retraction only made matters worse. A good workman, he said, knew when his work was right or wrong, and I must be a poor doctor to make such a charge without any evidence. He threatened to sue me and the hospital for making false

charges. The next evening he came to the office, but in a different frame of mind. He was full of apologies and with tears in his eyes, confessed that twenty years before he had had syphilis.

In cases like this, when you are yourself doubtful about the character of the disease, it is a serious matter to charge a person with syphilis, and it is, on the other hand, poor medical treatment to let the case pass without the proper advice. It is in such cases a difficult matter to know what to do, to do right.

Dr. G. D. Culver, closing discussion: The paper did what I wanted it to do—it brought out discussion, and I have enjoyed it and profited by it.

Dr. Welty said that he had not had much trouble in diagnosing early lesions of syphilis, such as mucous patches. It is true that they are not so puzzling. Most of the errors I called attention to were with chancre of the mucous membranes and other ulcerated lesions.

Dr. Graham spoke of the ease of diagnosis of lesions above the neck. I do not agree with him. I have seen sarcoma in the roof of the mouth and syphilis in the roof of the mouth, and the picture—as nearly as I could judge—was exactly the same. I think we are inclined to look upon syphilis as fairly easy to diagnose. It is not. We all make mistakes and we are going to continue to make them. I brought up the subject with the idea of calling attention to a few points that should make us a bit more careful. I do not think we should be misled by any laboratory report, whether positive or negative. You may have to deal with a lesion that is not syphilis, yet get a positive Wassermann, and we must consider that there may have been syphilis before, and the positive Wassermann may be the only indication present.

Dr. Spencer called attention to the fact that it might be inferred that I thought cauterization was a good thing. I do not remember ever having cauterized a chancre. We find that the lesions, no matter what they are, react to other treatment better.

I think chancroids must go to the G. U. men; they are very scarce in my work.

The question of considering any lesion which yields to treatment as syphilis, may get one into trouble. There is a skin condition which resembles syphilis and which yields to the iodides, notably sporotrichosis. We also know that blastomycosis, which may easily be mistaken for syphilis, will improve under the iodides. Not many years ago I saw a case of mycosis fungoides which I was determined was syphilis. Every test was negative, treatment was negative; after following the case for a number of months I came to the conclusion it was mycosis fungoides, and it proved to be that disease.

It is so easy to err in the diagnosis of syphilis, so difficult not to do so, that any discussion such as we have had should be of marked benefit.

### THE LATE CORRECTION OF MAL-UNITED FRACTURES OF THE EXTREMITIES.\*

By P. S. CAMPICHE, M. D., San Francisco.

The treatment of fractures has received so much attention in the last few years, and the progress made in this branch of surgery has been so great, that it seems as though a bad result should now be a thing of the past; and yet, for reasons to be stated below, it appears that mal-union still occurs in a large number of cases. It goes without saying that the best anatomical and functional result should always be our aim, but this ideal is not attained at all times and the fact re-

mains that even nowadays the primary treatment of many fractures often results in disaster.

The causes for the failures are many; some cases are difficult to diagnose, others present extraordinary obstacles to treatment even in the hands of the best surgeons, while tardy consolidation and anomalies in callus-formation, such as exuberant callus near an articulation or a deficient callus, at times determine an unfavorable result. But in most cases the harm is due to the fact that the fracture has to be treated by a man who does not have adequate facilities for the work, although the doctor is not always the one to blame for embarking in such a risky enterprise; we all know how difficult it is to persuade patients in outlying districts to leave their homes and go to the city for treatment.

To the doctor who admits that he is not properly equipped, the patients, even well-to-do persons who do not need to consider the expense, will answer that they will be satisfied with any kind of a result provided they do not have to leave their homes; this sounds very nice, but the same people who exert such pressure on their physicians and influence them to assume the responsibility for treatment of the case are the first to criticize him mercilessly and even to threaten to sue for damages in the event of a faulty union, and are without any regard for the man who has done his level best under adverse circumstances to please and to help them.

Let us follow the course of a typical case of this kind. By this time six or eight weeks have elapsed since the accident and the failure becomes every day more apparent to the doctor and also to the patient. This is the very time when prompt decision and energetic action are in place to prevent the patient from regarding the result as final and to persuade him that an important correction is still possible and necessary; but, curiously enough, a period of discouragement and inertia sets in during which both the surgeon and the patient seem loath to undertake anything definite, and nothing is done for a long time. To point out that there is still much room for progress in this direction and to call the attention of the medical profession to the great loss of time and working capacity entailed by such a course is the object of this paper.

In cases of this kind that have come to me for final correction I have often noted that four, six, eight, and even ten months have been permitted to elapse after the original injury before a surgical procedure would be proposed and accepted; during all this time the patient remained disabled and in a crippled condition. Many of them were unable to walk, and one, a young lady with a fracture near the elbow, was for months unable to dress alone; this patient had a supra condylar fracture of the humerus combined with posterior displacement of the inferior fragment in such a way that flexion was impossible. This was allowed to continue for four months before she came for an osteotomy of the humerus.

Again, a boy with a simple malleolar fracture was kept in a cast without any attention being

\* Read before the Forty-sixth Annual Meeting of the Medical Society of the State of California, Coronado.